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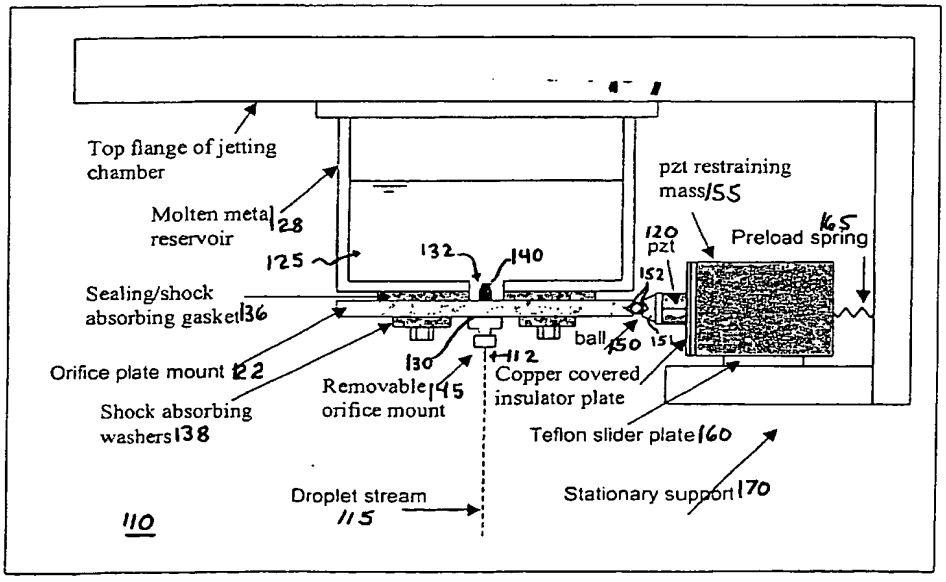
(54) Title: DROPLET GENERATION BY TRANSVERSE DISTURBANCES




(57) Abstract: The present invention enables the formation of droplets due to capillary stream break-up and minimizes variation in droplet formation time by applying a transverse disturbance to initiate instability on the capillary stream's surface. In one embodiment, a side-shaker apparatus comprises a reservoir adapted to hold molten metal, an orifice plate having an orifice in fluid communication with the reservoir, and a transverse disturbance generating member coupled to the orifice plate. The molten metal in the reservoir is ejected from the orifice to form a capillary stream. Due to capillary stream break-up, droplets pinch off from the capillary stream to form a droplet stream. The transverse disturbance generating member vibrates the orifice plate laterally (i.e., side to side) to apply a transverse disturbance to the capillary stream.

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